

# Gianmario Voria

· PH.D. STUDENT · SOFTWARE ENGINEER ·

📍 Via Madonna del Carmine 176, Agropoli(SA), Italy    ✉ gvia@unisa.it  
☎ +39 3287015939    in gianmario-voria    📱 gianwario.vercel.app

## PRESENT

---

Nov. 2023 – present    **Ph.D. Student in Computer Science**    UNIVERSITY OF SALERNO, ITALY  
Research project on Software Engineering for Artificial Intelligence, Fairness Engineering, Ethics

## VISITING

---

Feb. 2025 – May. 2025    Research Internship    POLYTECHNIQUE MONTRÉAL, CANADA  
Visiting researcher under the supervision of Prof. Foutse Khohm, working on bias detection in advanced AI models.

Apr. 2026 – Aug. 2026    Research Internship    NARA INSTITUTE OF SCIENCE AND TECHNOLOGY, JAPAN  
Visiting researcher under the supervision of Prof. Yutaro Kashiwa, working on software engineering for AI coding agents.

## EDUCATION

---

Feb. 2022 – Sep. 2023    **M.Sc.** in Computer Science    UNIVERSITY OF SALERNO, ITALY  
Curriculum of Software Engineering and IT Management  
Magna cum laude, Advisor: Prof. Fabio Palomba

Sep. 2018 – Sep. 2021    **B.Sc.** in Computer Science    UNIVERSITY OF SALERNO, ITALY  
Advisor: Prof. Andrea Abate

## PUBLICATIONS

---

### JOURNAL PUBLICATIONS

1. **G. Voria**, B. Scala, L. Todisco, C. Venditto, G. Giordano, G. Catolino, F. Palomba.  
“Fair and Square? Evaluating Fairness of LLM-Generated Synthetic Datasets.”  
*Information and Software Technology*, 2025
2. A. Cannavale, **G. Voria**, A. Scognamiglio, G. Giordano, G. Catolino, F. Palomba.  
“Fairness Set and Forgotten: Mining Fairness Toolkit Usage in Open-Source Machine Learning Projects.”  
*Information and Software Technology*, 2025
3. A. Parziale, **G. Voria**, G. Giordano, G. Catolino, G. Robles, F. Palomba.  
“Fairness on a Budget, Across the Board: A Cost-Effective Evaluation of Fairness-Aware Practices Across Contexts, Tasks, and Sensitive Attributes.”  
*Information and Software Technology*, 2025
4. **G. Voria**, F. Casillo, C. Gravino, G. Catolino, F. Palomba.  
“RECOVER: Toward Requirements Generation from Stakeholders’ Conversations.”  
*IEEE Transactions on Software Engineering*, 2025
5. V. De Martino, **G. Voria**, C. Troiano, G. Catolino, F. Palomba.  
“Examining the impact of bias mitigation algorithms on the sustainability of ml-enabled systems: A benchmark study.”  
*Journal of Systems and Software*, 2025
6. **G. Voria**, G. Sellitto, C. Ferrara, F. Abate, A. De Lucia, F. Ferrucci, G. Catolino, F. Palomba.  
“Fairness-aware practices from developers’ perspective: A survey.”  
*Information and Software Technology*, 2025

---

 CONFERENCE & WORKSHOP PUBLICATIONS

1. 🏆 (Best Paper Award) **G. Voria**, M. De Lucia, A. Raia, A. De Lucia, G. Catolino, F. Palomba.  
“Bias Ahead: Sensitive Prompts as Early Warnings for Fairness in Large Language Models.”  
*International Workshop on Fairness in Software Systems (FAIRNESS)*, 2026
2. A. Parziale, **G. Voria**, V. Pontillo, G. Catolino, A. De Lucia, F. Palomba.  
“SCOPE: A Dataset of Stereotyped Prompts for Counterfactual Fairness Assessment of LLMs.”  
*International Workshop on Fairness in Software Systems (FAIRNESS)*, 2026
3. A. Della Porta, **G. Voria**, A. Abbate, R. Sulipano, S. Lambiase, G. Catolino, F. Palomba.  
“Toward Measuring Prompt Quality: A Preliminary Investigation on Prompt Smells”  
*International Workshop on Software Quality Assurance for Artificial Intelligence (SQA4AI)*, 2026
4. A. Parziale, **G. Voria**, V. Pontillo, G. Catolino, A. De Lucia, F. Palomba.  
“Toward Systematic Counterfactual Fairness Evaluation of Large Language Models: The CAFFE Framework”  
*IEEE/ACM 48th International Conference on Software Engineering (ICSE) Research Track*, 2026
5. **G. Voria**, M. Openja, F. Khomh, G. Catolino, F. Palomba.  
“Tracing Stereotypes in Pre-trained Transformers: From Biased Neurons to Fairer Models”  
*23rd International Mining Software Repositories Conference (MSR)*, 2026
6. A. Parziale, **G. Voria**, V. Pontillo, A. Di Salle, P. Pelliccione, G. Catolino, F. Palomba.  
“Once Upon a Team: Investigating Bias in LLM-Driven Software Team Composition and Task Allocation”  
*IEEE/ACM 48th International Conference on Software Engineering: Software Engineering in Society (ICSE-SEIS)*, 2026
7. F. Palomba, **G. Voria**, A. Parziale, V. Pentangelo, A. Della Porta, V. De Martino, G. Recupito, G. Giordano.  
“Teaching Software Engineering for Artificial Intelligence: An Experience Report”  
*Euromicro Conference on Software Engineering and Advanced Applications*, 2025
8. **G. Voria**, G. Sellitto, C. Ferrara, F. Abate, A. De Lucia, F. Ferrucci, G. Catolino, F. Palomba.  
“A catalog of fairness-aware practices in machine learning engineering.”  
*Workshop on Evaluation of Qualitative Aspects of Intelligent Software Assistants (EQUISA)*, 2025
9. 🏆 (Best Paper Award) A. Parziale, **G. Voria**, G. Giordano, G. Catolino, G. Robles, F. Palomba.  
“Contextual Fairness-Aware Practices in ML: A Cost-Effective Empirical Evaluation.”  
*International Workshop on Fairness in Software Systems (FAIRNESS)*, 2025
10. **G. Voria**, S. Lambiase, MC. Schiavone, G. Catolino, F. Palomba.  
“From expectation to habit: Why do software practitioners adopt fairness toolkits?”  
*IEEE/ACM 47th International Conference on Software Engineering: Software Engineering in Society (ICSE-SEIS)*, 2025
11. **G. Voria**, R. Di Matteo, G. Giordano, G. Catolino, F. Palomba.  
“Data Preparation for Fairness-Performance Trade-Offs: A Practitioner-Friendly Alternative?”  
*Registered Report accepted at SANER*, 2025
12. F. Palomba, A. Di Sorbo, D. Di Ruscio, F. Ferrucci, G. Catolino, G. Giordano, D. Di Dario, **G. Voria**, V. Pentangelo, M. Tortorella, A. Sgueglia.  
“FRINGE: context-aware FaiRness engineeriNG in complex software systEms.”  
*18th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM) 2024*
13. **G. Voria**, G. Catolino, F. Palomba.  
“Is Attention All You Need? Towards a Conceptual Model For Social Awareness in Large Language Models.”  
*AI Foundation Models and Software Engineering (FORGE)*, 2024
14. **G. Voria**, V. Pentangelo, A. Della Porta, S. Lambiase, G. Catolino, F. Palomba, F. Ferrucci.  
“Community Smell Detection and Refactoring in SLACK: The CADOCS Project.”  
*38th IEEE International Conference on Software Maintenance and Evolution (ICSME), Tool Demo Track*, 2022

---

 RESEARCH INTERESTS

My main research area is strongly related to Software Engineering For Artificial Intelligence. In particular, I am studying Fairness Engineering in machine learning systems. In such context, I aim to discover new catalogs of practices to address fairness issues in critical artificial intelligence applications from different points of view, i.e., architecture-level techniques and communication-level techniques. Moreover, following current advances in AI technologies, I am working towards understanding and mitigating potential biases and ethical concerns in Large Language Models.

I am also involved in research activities on Humans and Social Aspects in Software Development, studying the impact of organizational structure, communication, and collaboration on software project success.

---

## SERVICE AND RESEARCH ACTIVITIES

---

### ORGANIZING COMMITTEE

**EQUISA** (2026): Workshop Organizer  
**FAIRNESS** (2026): Journal First Co-Chair  
**SQA4AI** (2025): Web & Publicity Chair  
**E-QSE** (2024): Web & Publicity Chair

### STUDENT VOLUNTEERING

**ICSE** (2026): Student Volunteer  
**SANER** (2025): Student Volunteer  
**SEEA** (2025): Student Volunteer  
**EASE** (2024): Student Volunteer

### PROGRAM COMMITTEE

**QUATIC** (2026): Program Committee Member, HESA Research Track  
**FORGE** (2026): Program Committee Member, Research Track  
**ICSE** (2026): Shadow Program Committee Member, Research Track  
**CAIN** (2026): Program Committee Member, Poster Track  
**FAIRNESS** (2026): Program Committee Member, Research Track  
**SQA4AI** (2026, 2025): Program Committee Member, Research Track  
**SANER** (2026): Program Committee Member, Short and Posters Track  
**TechDebt** (2026): Junior PC Member, Research Track  
**AIWare** (2025): Program Committee Member, Dataset & Benchmark Track  
**EQUISA** (2025): Program Committee Member, Research Track

### REVIEWING

**ACM Transactions on Software Engineering and Methodology (TOSEM)**: Reviewer  
**SoftwareX**: Reviewer  
**Automated Software Engineering Journal**: Reviewer  
**IEEE Software**: Reviewer  
**Journal of Systems and Software (JSS)**: Reviewer  
**Science of Computer Programming (SCICO)**: Reviewer  
**Information and Software Technology (IST)**: Reviewer  
**PROMISE** (2024): Subreviewer  
**EASE** (2024): Subreviewer  
**ICSE** (2025): Co-reviewer  
**ICPC** (2025): Co-reviewer  
**EASE** (2025): Subreviewer  
**Internetware** (2025): Co-reviewer

---

## TEACHING ACTIVITIES

---

### GUEST LECTURES

**Software Engineering for Artificial Intelligence (M.Sc.)** (2024): Guest Lecture: *Fairness from the SE perspective*  
**Software Sustainability (M.Sc.)** (2025): Guest Lecture: *ML Fairness in Practice*  
**Software Sustainability (M.Sc.)** (2025): Guest Lecture: *Detection and Analysis of Socio-Technical Metrics*

### TEACHING AND COURSE SUPPORT

**Software Engineering (B.Sc.)** (2025): Teaching, Exam Support, Projects Co-supervision  
**Software Engineering (B.Sc.)** (2024): Teaching, Exam Support, Projects Co-supervision  
**Software Engineering for Artificial Intelligence (M.Sc.)** (2024): Exam Support, Projects Co-supervision  
**Software Engineering for Artificial Intelligence (M.Sc.)** (2025): Exam Support, Projects Co-supervision  
**Software Engineering, Maintenance, and Evolution (M.Sc.)** (2025): Exam Support, Projects Co-supervision

**Software Engineering, Maintenance, and Evolution (M.Sc.) (2024):** Exam Support, Projects Co-supervision

**Fundamentals of Artificial Intelligence (B.Sc.) (2025):** *Teaching*, Exam Support, Projects Co-supervision

**Fundamentals of Artificial Intelligence (B.Sc.) (2024):** Exam Support, Projects Co-supervision

**Fundamentals of Artificial Intelligence (B.Sc.) (2023):** Exam Support, Projects Co-supervision

#### THESIS SUPERVISION

**Bachelor's & Master's Theses:** Co-supervision of more than 40 theses (2023–present)